North Beach Combined Sewer Overflow Control Project PN:312299



Department of Natural Resources and Parks
Wastewater Treatment Division

King County

Proposed Project at North Beach Pump Station and within Right-of-Way



Project Background & Need

- Combined sewer overflow (CSO) control is mandated by the Environmental Protection Agency and administered by the Washington State Dept. of Ecology
- Ecology standards allow no more than one discharge of untreated event per CSO outfall per year on a long term average
- North Beach Pump Station experienced 15 overflow events in 2011; the long term average is 10

Existing Facilities at North Beach Pump Station

- Pump station located on King County property in residential neighborhood
- Currently all facilities below-grade except for ancillary equipment
- Minimal landscaping at pump station



Site Photos - Existing Pump Station Site



Pump Station Site (front gate)



Street View

Site Photos - Neighboring Properties



Next Door Neighbor Property
South of Pump Station



Property Across the Street



Playground Area in Blue Ridge Park

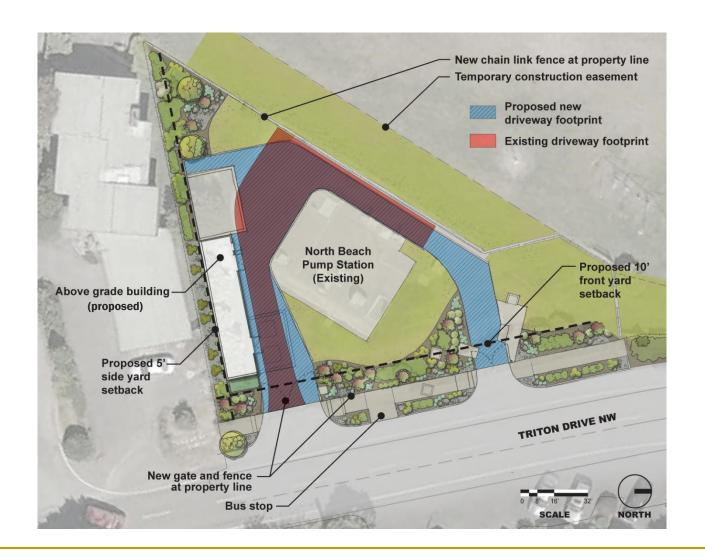


Property Across the Street

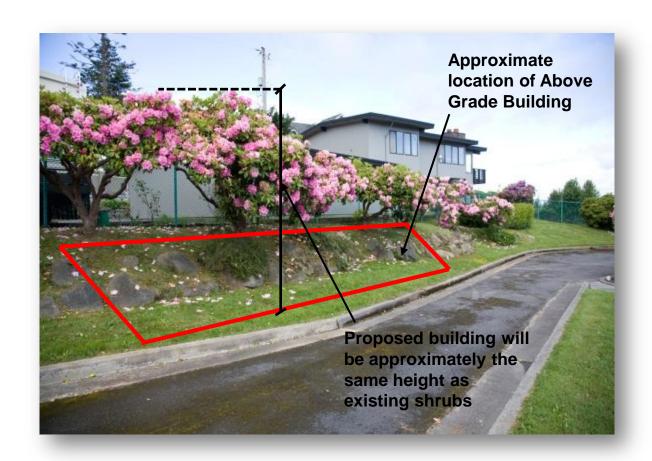
Proposed Project Will Include:

- Buried 330,000 gallon storage tank in street
- Below-grade odor control system for existing and new facilities
- Below-grade mechanical room
- Above-grade electrical building (approximately 12' x 55' x 15')
- Extend existing driveway to improve access for maintenance vehicles
- Install new landscaping at pump station as well as right-of-way improvements such as a sidewalk fronting the pump station property, new curbs and fencing
- Reconfigured roadway alignment at the intersection of NE Neptune PI and NW Blue Ridge Dr/Triton Dr NE designed as a "T" intersection in order to improve public safety.

Pump Station & Proposed Facilities



Footprint of Proposed Above-Grade Electrical Building



Major Land Use Issues

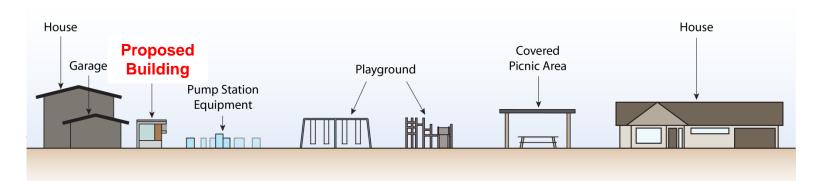
SMC 23.51A.002: Public Facilities in Single Family Zones

Visual Impacts

- Building located to minimize impacts
- New facilities building lower in elevation than neighboring houses
- Building replaces existing berm and large shrubs



Proposed View from Triton Dr. NW



Controlling Odors

- Much less potential for nuisance odors – currently no odor control at existing pump station
- Installing odor control for the storage tank and existing pump station
- Modeled potential odors at site; evaluation determined no effect with control





King Street Odor Control Facility

Noise

- During Construction
 - Short-term noise increase related to construction
 - Construction noise in compliance with City of Seattle noise ordinance
 - Potential noise mitigation measures
 - Screen walls
 - Enclosures
 - Mufflers
- After Construction
 - No increase in noise expected
 - Machinery in facilities is totally enclosed
 - Machinery not inherently noisy

Noise Mitigation: Screen Walls

Screen Wall Examples







Noise Mitigation: Enclosures

Noise Enclosure Examples







Noise Mitigation: Equipment Mufflers

Equipment Muffler Examples

- Modify Equipment

 Replace exhaust system
- Modify Tools Improve muffler and install exhaust line







Truck Trips

During Construction

- Up to 2200 total truck trips during duration of project
- Up to 30 truck trips per day during peak construction

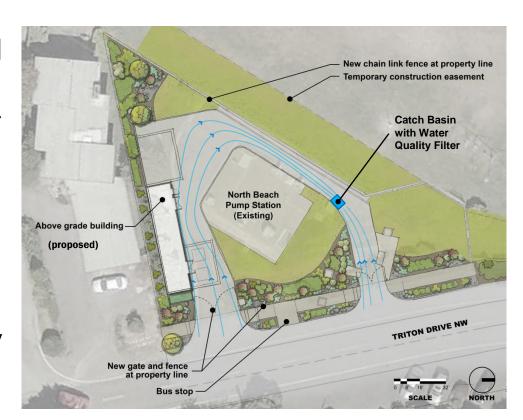
After Construction

- Facility will require routine maintenance and operation activities (~10-20 visits/year)
- Other truck traffic is expected to stay the same as before construction

Controlling Surface Runoff

Runoff will be controlled by:

- Using pervious pavement for driveway
- Roof runoff from new building will be captured in bioretention planter
- Driveway will be sloped to direct runoff into two areas:
 - Catch basin with water quality filter that eventually flows into Puget Sound
 - Wet well where flows eventually treated at West Point Treatment Plant



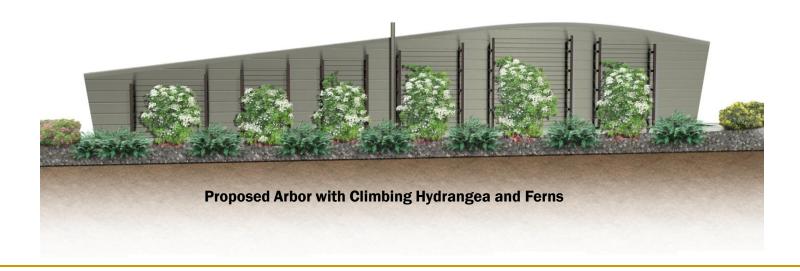
Consistency with Code Requirements: Special Use Criteria

- Some over-excavation may extend into private park
- Easement was obtained from Blue Ridge Club Inc.
- Work will occur on grass lawn* outside of critical areas
- Work temporary in nature
- Minor excavation only
- Will restore area once construction is complete.
- *Illustration is dated; vegetation shown were blackberries that have since been removed



Consistency with Code Requirements: Setback Waivers

- Could not achieve standard setback requirements for new above-grade electrical building because of limited space at site
- Impacts mitigated by locating building next to residential garage and adjacent to street to minimize visual impacts
- Will construct an arbor with climbing hydrangea and ferns to help screen building.



Landscaping - Street View



Before





Community Recommended Planting Palette

- Drought tolerant, low maintenance plantings
- Includes native plants
- Palette refined with community input to include additional color interest



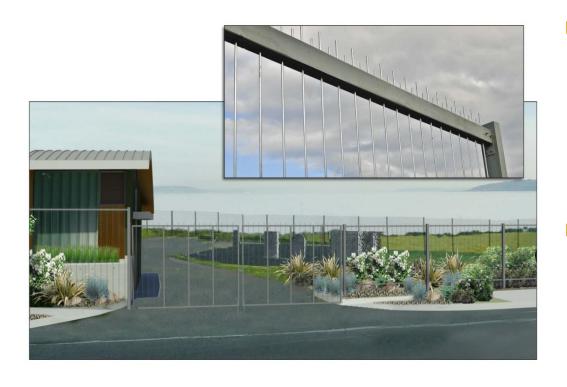
Other Landscaping Details

- Community is interested in salvaging plants
- Existing plantings in affected areas will be restored
- Landscaping on north side of building softens view for adjacent home





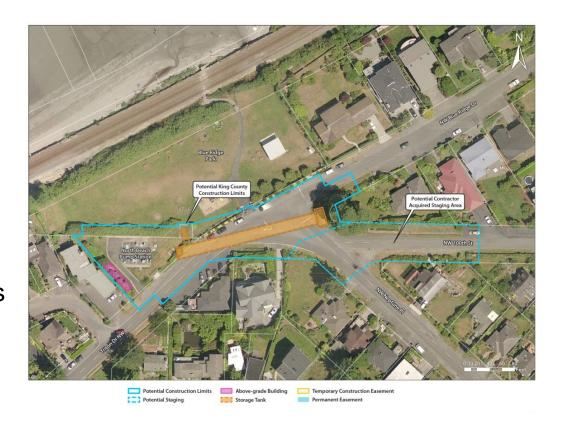
Community Recommended Fence



- Community favored fence type
 - Difficult to climb
 - Minimizes visual distraction/blockage
- Provides site safety& security

Construction

- Total project construction will take up to 24 months
- Work in street will take up to one year
- King County will work with neighbors on residential access, access to Blue Ridge Park, bus detours, and deliveries and services
- Working hours: will abide by City of Seattle Noise Ordinance



What the community can expect during construction

- King County will provide advance notice of construction activities and progress updates throughout the 2-year construction duration
- King County will work with the Metro Construction Coordinator to establish bus route detour during street closure
- Staff will work to ensure residential access and continued deliveries and services
- Staff will be available 24/7 on a construction hotline to address concerns and complaints

Keeping the community informed

- Community meetings, events and briefings
- Newsletters, fliers, and press releases
- One on one meetings with project neighbors
- Site visits with Blue Ridge Board
- Project website

<u>www.kingcounty.gov/environment/wtd/Construction/Seattle/NBeachCSOStorage</u>



North Beach Pump Station Site Design Update



Beach-inspired building and landscape design

Community Input Helps Shape Design

King County Wastewater Treatment Division hosted a community design workshop on May 12, 2012 to hear the community's thoughts about three landscape and architecture design themes for the County's North Beach Pump Station site. The project team also discussed street restoration elements under discussion with the City of Seattle. The project team provided another opportunity for community input at the Blue Ridge Club General Meeting on June 11, which was opened to all interested community members. See page 2 for a summary of the community's thoughts and suggestions on design.



Storage facility configuration changes

King County conducts independent project reviews to look for opportunities to improve cost efficiency, constructability, and operations of our facilities. The current design developed for North Beach was largely confirmed by the review team, with one important change in the storage facility configuration, from twin pipelines to a concrete box culvert. See page 3 for more information on this new configuration and its benefits.

Proposed box culvert location and configuration